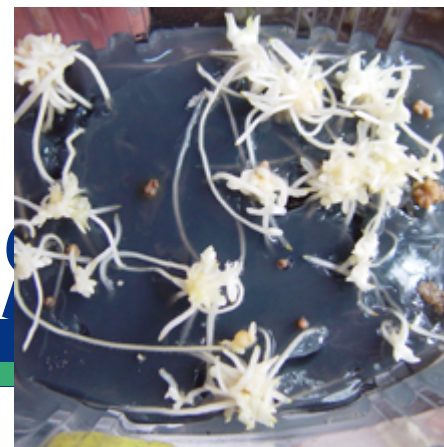




USDA-SBIR

Presentation to the
CSREES Grantsmanship
Workshop



SBIR Program

- Started in 1983
- All Federal agencies with more than \$100 million in extramural R&D must set aside 2.5% of their extramural R&D funds for an SBIR program
- Only US-owned, for-profit, small business firms located in the United States are eligible
- The PI/PD must work a minimum of 51% for the small business firm during the period of the award



SBIR

SBIR Program

- Government-wide program with 11 participating Federal agencies and total budget of >\$2 billion
- USDA SBIR budget in FY 2005 = \$19.4 million
- Highly competitive program with 10-20% success rate



SBIR

Participating SBIR Agencies

- DOD
- HHS (NIH)
- NASA
- DOE
- NSF
- DHS
- USDA
- DOT
- DOC
- EPA
- DoEd



SBIR

Features of USDA SBIR Program

- Award Grants Only
- Awards Based on Scientific and Technical Merit
- Ideas are Investigator-Initiated
- Proposals Reviewed by Confidential Peer Review Using Outside Experts From Non-profit Organizations
- Funds Allocated to Topic Areas in Proportion to Number of Proposals Received
- Subcontracting to Universities and USDA Labs Permitted



SBIR

Features of USDA SBIR Program

- Phase I Grants = 8 Months/\$80,000
- Phase II Grants = 2 Years/\$350,000
- Phase III – commercialization stage – non SBIR funding
- 12 Month No-cost Extension Available
- All Applicants Receive Verbatim Copies of Reviews



SBIR

Topic Areas

- Forests & Related Resources
- Plant Production & Protection - Biology
- Animal Production & Protection
- Water & Soil Resources
- Food Science & Nutrition
- Rural & Community Development
- Aquaculture
- Industrial Applications
- Marketing & Trade
- Animal Waste Mgmt.
- Small & Mid-Size Farms
- Plant Production & Protection - Engineering



SBIR

Technology Areas Supported by USDA/SBIR Program

- **Information Technology**
- **Robotics**
- **Electronics**
- **Biotechnology**
- **Nanotechnology**
- **Microelectro
Mechanical Systems
(MEMS)**
- **Acoustics**
- **Remote Sensing**
- **Genetic Engineering**
- **Material/Coatings**
- **Food Safety**
- **Biofuels**
- **Machine Vision**
- **Precision Agriculture**
- **Engineering**
- **Physics**
- **Chemistry**



SBIR

History of USDA - SBIR Funding

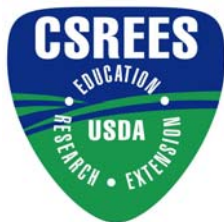
Year	Budget <i>MM</i>	Phase I	Phase II
1999	13.30	84/425	32/56
2000	15.56	89/480	36/59
2001	16.25	90/480	37/63
2002	15.70	86/449	39/68
2003	17.74	88/656	38/67
2004	18.18	99/582	38/65
2005	19.20	93/557	40/79
2006	19.17	101/650	33/61



SBIR

Geographical Location of USDA SBIR Winners FY 83-FY 05

CA		W		NE		NC		S	
CA	212	WA	88	MA	78	MI	67	TX	65
		OR	79	NY	53	WI	48	VA	57
		CO	66	PA	52	MN	46	NC	49
		HI	61	MD	36	OH	40	FL	41
		ID	49	NJ	29	KS	39	GA	22
		AZ	38	ME	26	IN	30	LA	21
		MT	38	CT	24	NE	23	OK	16
		WY	28	VT	22	IL	23	TN	14
		NM	21	NH	8	ND	23	MS	13
		UT	16	DE	8	IA	23	SC	12
		AK	11	DC	5	SD	16	KY	11
		NV	5	RI	5	MO	16	AL	7
				WV	5			AR	7
								VI	1
<hr/>		<hr/>		<hr/>		<hr/>		<hr/>	
212		499		346		394		336	
11.9%		27.9%		19.4%		22.0%		18.8%	



SBIR

University Involvement in USDA SBIR



- ▶ Strongly encouraged
- ▶ University faculty may serve as consultants or receive a subcontract (both limited to no more than 1/3 of Phase I award or 1/2 of Phase II award) and continue to work full time at university
- ▶ University faculty may serve as principal investigator on the grant, by reducing university employment to 49% for duration of grant and if the SBIR research is performed someplace other than their research lab
- ▶ It is usually not acceptable for university faculty to serve as consultants and have all the research done in their lab



SBIR

Advice for Phase I

- Give us a **vision** of where you want to be at the end of Phase II
- Focus Phase I research on critical enabling factor(s)
- Sell the importance of your project
- Provide detailed experimental plan
- Provide insight into commercial potential
- Show connectivity with the communities you are intending to serve



SBIR

Factors that Improve Chances for Commercial Success

- High Scientific/Technical Merit
- Good Consultants, CRADA
- Business Expertise
- Phase III Partners
- Marketing Plan
- Commercialization Assistance Program



SBIR

Solicitation/Proposal Schedule: FY 2007/2008

- FY 2008 Solicitation will be Released 6/1/07
- Phase I Proposal Deadline Date will be 9/1/07
- Panels Meet in January & February of 2008
- Award Decisions Made by 3/1/08
- Phase I Grant Period will be from 5/1/08 to 12/31/08
- FY 2007 Phase II Deadline Date will be 2/1/07



SBIR

U.S. Department of Agriculture

Small Business Innovation Research Program

Dr. Peter Burfening

Animal Production and Protection;

Dr. Richard Hegg

Animal Manure Management

Dr. Charles Cleland

Forests and Related Resources;
Air, Water, and Soil; Aquaculture;
Small and Mid-Size Farms

Dr. Suresh Sureshwaran

Food Science and Nutrition; Rural
and Community Development,
Marketing and Trade

Dr. William Goldner

Plant Production and Protection –
Biology; Industrial Applications;
Plant Production and Protection –
Engineering;

Andrew P. Wilson

Program Specialist - SBIR



SBIR

USDA SBIR HOMEPAGE

www.csrees.usda.gov/fo/sbir

- Program Information
- Solicitation (Request for Applications)
- Technical Abstracts
- Link to SBA and Other SBIR Programs
- Upcoming SBIR Conferences



SBIR

U.S. Department of Agriculture

Small Business Innovation Research Program

Waterfront Centre, Suite 2312

800 9th Street, SW

Washington, DC 20024

Phone: (202) 401-4002 • Fax: (202) 401-6070

E-mail: sbir@csrees.usda.gov

Web Site: www.csrees.usda.gov/fo/sbir



SBIR

Electronic Submission

- Mandatory electronic submission
- You must register with grants.gov
 - www.grants.gov/assets/Grants.govRegistrationBrochure.pdf



SBIR

Success Stories: Rainbow Organic Farms Company



“SBIR provided the necessary funding to create a new economic future for our local small family farms”. -- Diana Endicott



SBIR

Success Stories: Rainbow Organic Farms Company

Innovation:

- Developed the first USDA ISO 9000 based Quality System Verification Program (QSVP) for Good Natured Family Farms (GNFF) all-natural beef and free-range poultry raised on local small family farms.
- QSVP model provides comprehensive *standard operating procedure* (SOPs) for identification, traceability and label claim verification for production, processing, and retail sales.



SBJR

Success Stories:

Rainbow Organic Farms Company

Impact:

- Developed and trademarked 'Good Natured Family Farms' all-natural branded food product line and achieved wholesale gross sales in 2004 of 2.5 million dollars.
- The 40 Good Natured Family Farms Alliance members farm over 16,000 acres of farmland.
- Recognized for two major awards including: Kansas City BTG Environmental Excellence Award and the National Agriculture Center and Hall of Fames' Farmers Honor Acre Award.



SBJR

- Alternative Approaches - Plant Production and Protection – Biology CEA Systems, Ithaca, NY

Biomolecular Farming System for Industrial
Pharmaceutical and Other Non-food
Products

- Optimizing protein production with
environmental control

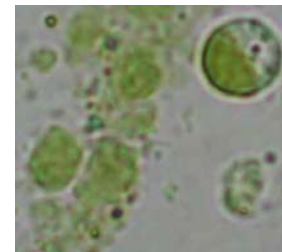
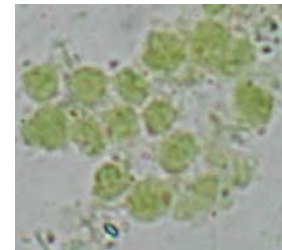


Enabling Transplastomic *Dunaliella* as Green Biofactories

Uses magnetophoresis system
developed from previous USDA SBIR
PI and PII grants

Potential Impact:

Developing transgenic algae grown
in bioreactors to produce a wide-
range of high-value chemicals



Innovation:

Developed a unique process for the conversion of low value feedstock to biodiesel which can be produced at costs competitive to traditional diesel fuel





Pilot plant for biodiesel production

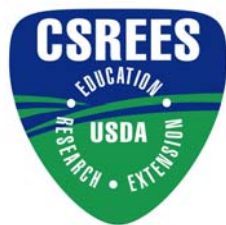
Impact:

- ▶ Consistent production of both high quality biodiesel and a glycerin by-product
- ▶ Lowest production costs in the industry
- ▶ Competitively priced capital investments
- ▶ Elimination of waste water discharge
- ▶ Complete solvent recovery

USDA - SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROGRAM

Bottom Line

- SBIR projects are effective technology transfer mechanisms moving publicly developed technology into private sector applications that benefit different aspects of American agriculture and rural America
- Royalties and licensing revenues from many SBIR projects accrue to our university partners and other public technology developers (e.g. ARS)
- Projects need to culminate in commercially viable enterprises.
- Priorities: manufacturing, alternative energy, and homeland security.



SBIR